

WHAT IS CLAIMED IS:

1. A wireless communication apparatus  
5 comprising:  
a multipath detection part which detects a  
state of multipath in said wireless communication  
apparatus; and  
a send part which sends multipath  
10 detection information detected by said multipath  
detection part to a wireless communication apparatus  
at the other end.

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2. A wireless communication apparatus  
comprising:  
a multipath component canceling signal  
20 generation part which generates a signal which  
cancels a multipath component in a wireless  
communication apparatus at the other end on the  
basis of multipath detection information  
representing a state of multipath sent from said  
25 wireless communication apparatus at the other end;  
and  
a send part which sends said signal which  
cancels said multipath component generated in said  
multipath component canceling signal generation part  
30 to said wireless communication apparatus at the  
other end.

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3. The wireless communication apparatus as  
claimed in claim 2, said multipath component

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canceling signal generation part comprising:

a multipath component generation part  
which generates a multipath component on the basis  
of said multipath detection information representing  
5 said state of multipath in said wireless  
communication apparatus at the other end; and

an interference wave detection part which  
detects an interference wave occurring between said  
multipath component and a send wave.

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4. The wireless communication apparatus as  
15 claimed in claim 3, said interference wave detection  
part comprising:

a filter part which filters a synthesized  
wave of said multipath component and said send wave;  
and

20 an interference wave signal generation  
part which generates an interference wave signal  
corresponding to that in said wireless communication  
apparatus at the other end by comparing output  
signal from said filter part and said send wave.

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5. The wireless communication apparatus as  
30 claimed in claim 4, further comprising:

an opposite phase part which changes a  
phase of said interference wave signal to an  
opposite phase of said phase; and

35 a send part which sends said interference  
wave signal having said opposite phase to said  
wireless communication apparatus at the other end.

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15                   7. A wireless communication method  
comprising the step of:  
                  a wireless communication apparatus sending  
a signal which cancels a multipath component in a  
wireless communication apparatus at the other end to  
20 said wireless communication apparatus at the other  
end with a send signal.

25                   8. The wireless communication method as  
claimed in claim 7, wherein said signal which  
cancels said multipath component is a signal  
inverted from an interference wave signal generated  
30 from said multipath component in said wireless  
communication apparatus at the other end.

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comprising the steps of:

a first wireless communication apparatus  
detecting a state of multipath in said first  
wireless communication apparatus;

5 said first wireless communication  
apparatus sending multipath detection information on  
said state to a second wireless communication  
apparatus;

10 said second wireless communication  
apparatus receiving said multipath detection  
information;

15 said second wireless communication  
apparatus generating a signal for canceling a  
multipath component in said first wireless  
communication apparatus on the basis of said  
multipath detection information; and

20 said second wireless communication  
apparatus sending said signal for canceling said  
multipath component to said first wireless  
communication apparatus.

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